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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,014	09/11/2003	James Russell Boykin	AUS920030622US1	5891

35525 7590 04/09/2007	EXAMINER	
IBM CORP (YA)	MITCHELL, JASON D	
C/O YEE & ASSOCIATES PC	ART UNIT	PAPER NUMBER
P.O. BOX 802333	2193	
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SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

	Application No.	Applicant(s)
Office Action Summary	10/660,014	BOYKIN ET AL.
	Examiner	Art Unit
	Jason Mitchell	2193

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *11 September 2003*.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-22* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-22* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *11 September 2003* is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date *9/11/03*.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1. . Claims 1-22 are pending in this application.

Drawings

2. **Figures 1-4 and 5A-C should be designated by a legend such as --Prior Art-- because only that which is old is illustrated.** See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. **Claims 2-6, 12-16 and 22 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.**

5. **Claims 2-6 and 12-16** recite providing class loaders and plug-in class loaders, but do not provide a useful, concrete and tangible result (see e.g. claims 7 and 17).

6.   **Claim 22** is not limited to tangible embodiments.

In view of Applicant's disclosure (see the paragraph bridging pp. 24 and 25) the

medium is not limited to tangible embodiments, instead being defined as including both

tangible embodiments (e.g., "recordable-type media, such as a floppy disk") and

intangible embodiments (e.g., "transmission-type media, such as ... radio frequency and

light wave transmissions"). As such, the claim is not limited to statutory subject matter

and is therefore non-statutory.

Claim Rejections - 35 USC § 112

7.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

8.   **Claim 1 recites the limitation "the application class loader hierarchy" in line

8. There is insufficient antecedent basis for this limitation in the claim.** It is not

clear if this "class loader hierarchy" is the same or different from the "plug-in

application's class loader hierarchy for an application".

9.   **Claim 1 rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.**

Claim 1 recites "wherein each plug-in class loader is associated with a single application

class loader within the application class loader hierarchy". This language can be read to

have two distinct meanings. The language can be read as describing a plurality of plug-

in class loader/ application class loader pairs, or a single application class loader which

has an association with each of a plurality of plug-in class loaders.

Claim Rejections - 35 USC § 102

10.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

11.   **Claims 1-2, 7-12 and 17-22 are rejected under 35 U.S.C. 102(a) as being**

anticipated by US 2002/0184226 to Klicnik et al. (Klicnick).

12.   **Regarding Claim 1:** Klicnik discloses a method for selecting a correct class

loader for a plug-in within a class loader hierarchy, comprising the steps of:

creating a plug-in class loader for each class loader in a plug-in application's

class loader hierarchy for an application, wherein each plug-in class loader is

associated with a single application class loader within the application class loader

hierarchy (par. [0031] "each plug-in must be provided with a dedicated class loader"),

and is configured such that it delegates to its associated application class loader (par.

[0043] "the class loader for parent is checked next"); and

loading of a class using a selected plug-in class loader, the selected plug-in class

loader that delegates to the application class loader that loaded an associated

application class (par. [0031] "each plug-in must be provided with a dedicated class

loader").

13.   **Regarding Claims 2 and 12:** Klicnik discloses a method for selecting a class

loader for a plug-in, the method comprising:

       providing a class loader hierarchy, wherein the class loader hierarchy includes a

plurality of class loaders (Fig. 2); and

       providing a plug-in class loader for each class loader in the class loader

hierarchy (par. [0031] "each plug-in must be provided with a dedicated class loader"),

wherein each plug-in class loader delegates to a respective class loader (par. [0043]

"the class loader for parent is checked next").

14.   **Regarding Claims 7 and 17:** The rejections of claims 2 and 12 are incorporated,

respectively; further Klicnik discloses

       responsive to an application class loading a plug-in class, identifying a class

loader within the class loader hierarchy that loaded the application class (par. [0032] "p

particular plug-in specifies its prerequisites explicitly");

       identifying a plug-in class loader that is provided for and delegates to the

application class loader (par. [0035] "a plug-in's class loader"; fig. 5); and

       loading the plug-in class using the plug-in class loader (par. [0035] "a plug-in's

class loader is used to load all of its classes"; fig. 5).

15.   **Regarding Claims 8 and 18:** The rejections of claims 2 and 12 are incorporated,

respectively; further Klicnik discloses:

responsive to a first application class loading a first plug-in class, identifying a

target class loader within the class loader hierarchy that loaded a target class (par.

[0032] "p particular plug-in specifies its prerequisites explicitly");

identifying a plug-in class loader that is provided for and delegates to the target

class loader (par. [0035] "a plug-in's class loader"; fig. 5); and

loading the first plug-in class using the plug-in class loader (par. [0035] "a plug-

in's class loader is used to load all of its classes"; fig. 5).

16.   **Regarding Claims 9 and 19:** The rejections of claims 8 and 18 are incorporated,

respectively; further Klicnik discloses the step of identifying a target class loader within

the class loader hierarchy that loaded a target class includes using a class loader that

loaded the application class to look up the target class (par. [0035] "the classes a class

loader will load on behalf of class loaders from other plug-ins").

17.   **Regarding Claims 10 and 20:** The rejections of claims 8 and 20 are

incorporated, respectively; further Klicnik discloses

responsive to a second application class loading a second plug-in class,

identifying the target class loader within the class loader hierarchy that loaded the target

class par, [0035] "will load on behalf of class loaders from other plug-ins";

identifying the plug-in class loader that is provided for and delegates to the target

class loader (par, [0035] "explicitly detail the classes a class loader will load on behalf of

class loaders from other plug-ins"); and

loading the second plug-in class using the plug-in class loader (par, [0035]

"explicitly detail the classes a class loader will load on behalf of class loaders from other

plug-ins").

18.   **Regarding Claims 11 and 21:** The rejections of claims 10 and 20 are

incorporated, respectively; further Klicnik discloses the first plug-in class and the second

plug-in class share data (par. [0034] "expose all of a plug-in's classes for user by

dependent plug-ins").

19.   **Regarding Claim 22:** Klicnik discloses a computer program product, in a

computer readable medium, for selecting a class loader for a plug-in, the computer

program product comprising:

a class loader hierarchy, wherein the class loader hierarchy includes a plurality of

class loaders (Fig. 2); and

a plug-in class loader for each class loader in the class loader hierarchy, wherein

each plug-in class loader delegates to a respective class loader (par. [0031] "each plug-

in must be provided with a dedicated class loader").

Claim Rejections - 35 USC § 103

20.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

21.   **Claims 3-6 and 13-16 are rejected under 35 U.S.C. 103(a) as being**

unpatentable over US 2002/0184226 to Klicnik et al. (Klicnick) in view of Applicant

admitted prior art (AAPA).

Regarding Claims 3-6 and 13-16: Klicnick does not explicitly disclose the plurality of

class loaders including boot class, extension, system and one or more application class

loaders.

22.   AAPA teaches that the claimed boot class, extension, system and one or more

application class loaders (see Fig. 5B 530, 520, 510, 502 and 504) were in common use

at the time of the invention (pg. 17, 3rd para. "Figure 5B illustrates ... the common class

loader hierarchy").

23.   It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the teachings Klicnick's and AAPA to "provide an

improved technique for dynamically loading independent code components" (Klicnick

par. [0012])

Conclusion

24.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Mitchell whose telephone number is (571) 272-3728. The examiner can normally be reached on Monday-Thursday and alternate Fridays 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jason Mitchell
3/31/07

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